

**DATE PRESENTING CLINICAL SIGNS**

2/27/23 History: Recent history of mild azotemia with low USG.

**PATIENT**

Teddy Greenwell

Current Medications: None listed.  
 Date of Previous IntraPet Ultrasound: No previous.  
 Sedation: Torbugesic IV.  
 Stat Report: Not requested.

**SPECIES**

Canine

Imaging Performed By: Stephanie Warga RDCS, RVT.

**BREED**

Labrador

**SEX**

Intact Male

**AGE**

4/28/15

**WEIGHT**

75 Pounds

**ULTRASONOGRAPHIC EXAMINATION OF THE ABDOMEN****Urinary System**

Urinary bladder is adequately distended with anechoic contents. No masses, inflammatory changes, echogenic sediment or cystoliths are observed. The urinary bladder, trigone and visible pelvic urethra are normal in thickness with a smooth mucosal surface.

Prostate is normal in size for an intact male. Parenchyma is diffusely homogenous and relatively hyperechoic. Normal distinct margins and symmetrical bilobed shape are maintained.

Kidneys are bilaterally on the small end of normal size for a patient this size, with the left kidney measuring 6.78 cm and the right kidney measuring 6.28 cm in size. They are irregular in shape as a result of chronic infarcts bilaterally, and diffusely echogenic with decreased corticomedullary distinction and poor visualization of internal architecture. Pyelectasia is noted bilaterally, more significant in the left kidney, measuring 0.56 cm in the transverse view. Additionally, small cortical cysts are noted bilaterally. There is no mineral observed.

**Adrenal Glands**

Left adrenal gland is normal in size (3.56 cm long x 0.92 cm at cranial pole and 0.51 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal. A hyperechoic nodule is noted in the cranial pole of the left adrenal gland.

Right adrenal gland is normal in size (3.19 cm long x 0.82 cm at cranial pole and 0.72 cm at caudal pole), shape and overall architecture, echogenicity and echotexture. Visible surrounding vasculature appears normal.

**Spleen**

Spleen is subjectively normal in size with a normal smooth capsular contour. Parenchyma is appropriately finely textured and homogenous with normal echogenicity relative to surrounding tissue (hyperechoic to liver). No focal nodules or masses are observed. Splenic vasculature appears normal.

**Liver**

Liver is subjectively normal in size with normal smooth curvilinear peripheral contour. Parenchyma is appropriately hypoechoic to the spleen in echogenicity and appropriately mildly coarse and homogenous in echotexture. No focal lesions are observed. Visible vasculature and biliary tree appear normal without distension or congestion.

Gallbladder is moderately distended with anechoic bile as well as mild suspended and gravity dependent echogenic debris. The wall is smooth without visible thickening. There is no evidence of cystic or CBD dilation. There is no evidence of effusion or inflammation.

**INTERPRETED BY**

Beth Johnson, DVM  
 DACVIM

**HOSPITAL NAME**

North Laurel AH

**REFERRING VET**

Dr. Steere

**INVOICE**

21316

### ***Gastrointestinal***

The visible stomach wall is normal in thickness and layering. The lumen of the stomach is empty with no evidence of obstruction, foreign material or infiltrative disease. Pyloric outflow tract appears patent.

The visible small intestines are normal in wall thickness and layering. Small intestinal motility appears adequate (1-3 contractions per min). The lumen of the small intestine is empty with no evidence of obstruction, foreign material or infiltrative disease.

The visible colon is normal in wall thickness and layering. Contents are consistent with normal formed feces and gas.

### ***Pancreas***

The observed pancreas appears appropriately isoechoic to surrounding omental fat. Visible capsule is smooth and normal in contour. Visible pancreatic parenchyma is homogenous and unremarkable. There is no visible pancreatic duct dilation. There is no evidence of active peripancreatic inflammation.

### ***Free Abdomen***

There is no evidence of peritoneal effusion. There is no apparent lymphadenopathy.

### ***Other***

Both testicles are visualized without evident testicular pathology.

## **ULTRASONOGRAPHIC FINDINGS**

### **Primary Findings**

- Chronic Kidney Disease with bilateral pyelectasia – This appearance of the kidneys is consistent with chronic kidney disease such as chronic glomerular or interstitial nephritis, chronic pyelonephritis, etc. Differentials for pyelectasia include pyelonephritis, diuresis, congenital malformation or ureteral or lower urinary tract obstruction.

### **Secondary Findings**

- Mild gallbladder debris - Cholecystic debris is of unknown clinical significance. It can be seen with biliary stasis from fasting or illness. Cholecystic debris is not necessarily related to hepatobiliary disease. Echogenic bile is most commonly an incidental finding in dogs and should be interpreted in combination with clinical signs such as nausea, inappetence, cranial abdominal discomfort and/or laboratory changes such as increased ALP and/or increased Tbili.
- Hyperechoic adrenal nodule in the cranial pole of the left adrenal gland – Differentials include primary adrenal cortical adenoma or adenocarcinoma, pheochromocytoma, myelolipoma, adrenal hyperplasia secondary to pituitary disease or metastatic disease. Ultrasound alone cannot differentiate between functional and non-functional nodules and/or between benign and malignant disease. Small nodules without other evidence of abdominal disease (to suggest metastatic disease) and/or clinical signs (to suggest adrenal disease) are most often incidental and should be monitored.

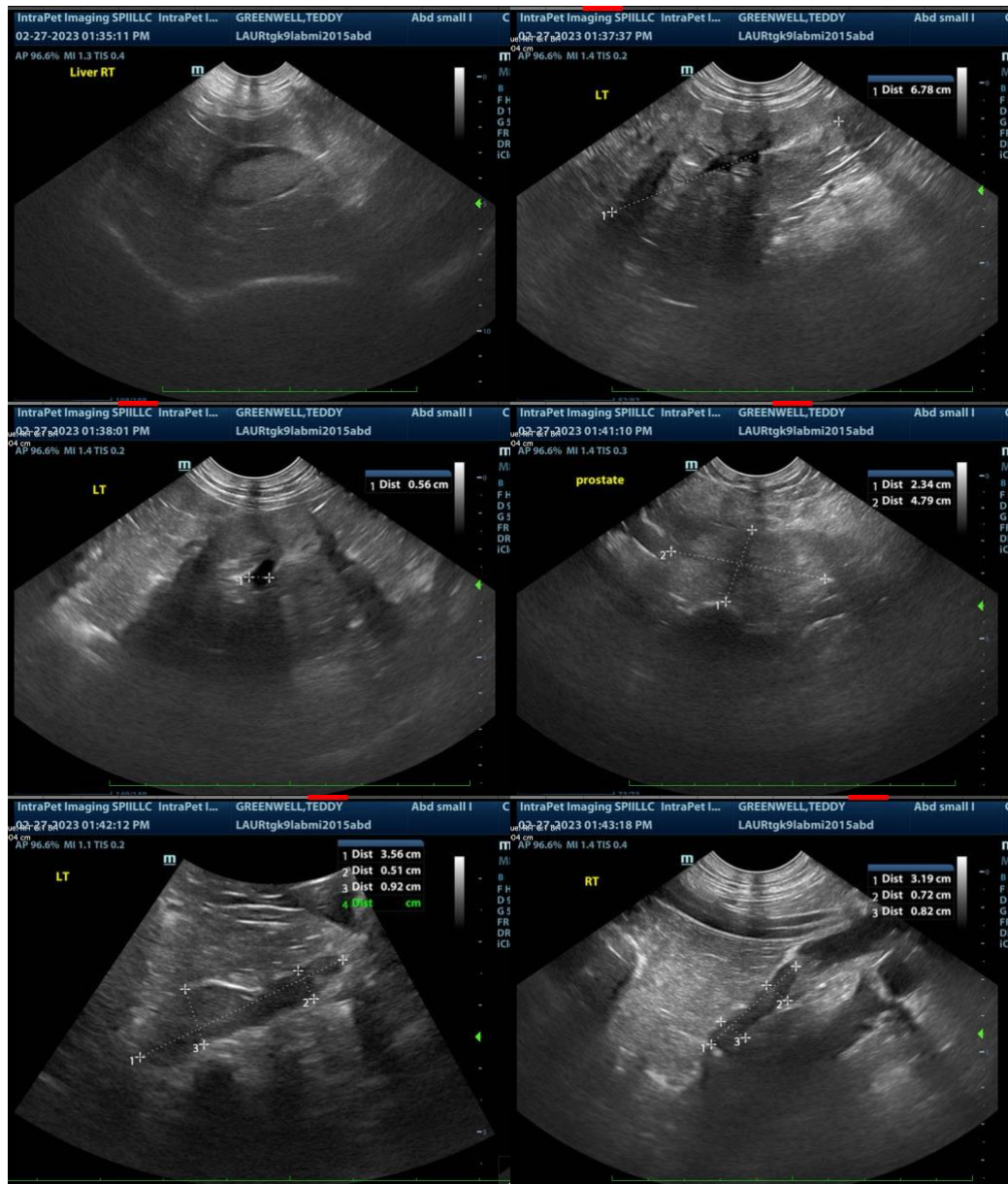
## **INTERPRETATION OF THE FINDINGS & FURTHER RECOMMENDATIONS**

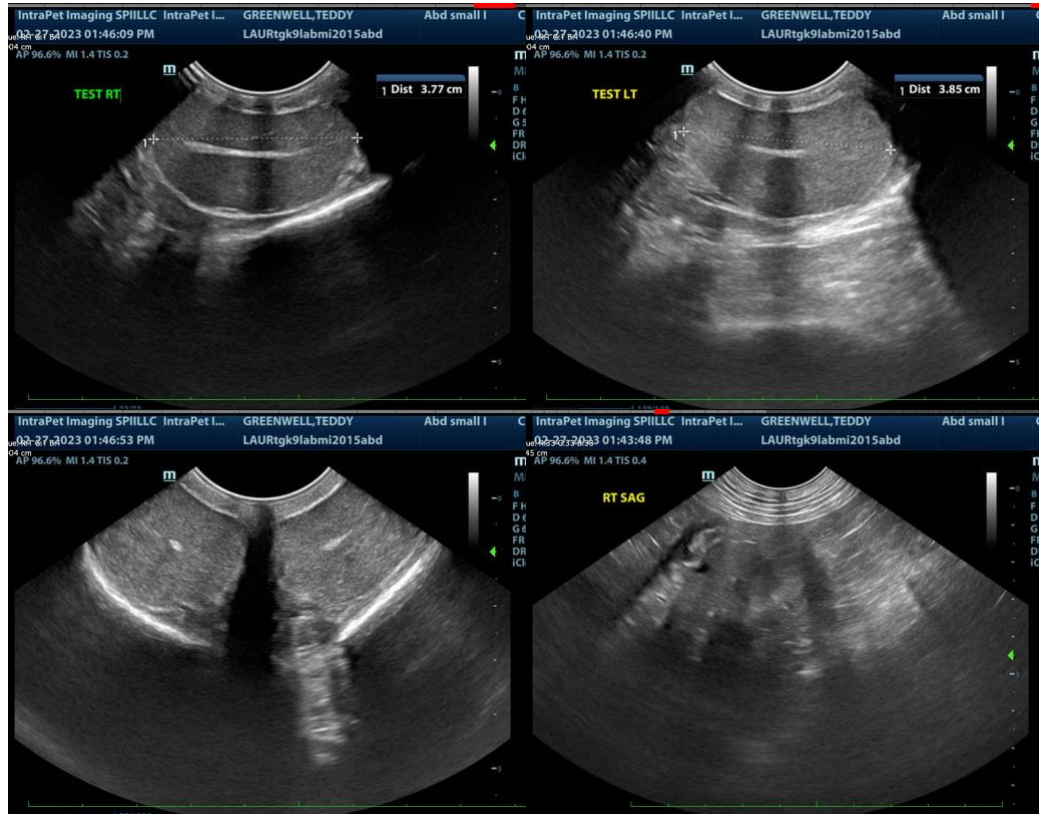
Given the appearance of this patient's kidneys, the newly reported azotemia is believed to be a chronic process or potentially an acute on chronic process. Therefore, if not recently evaluated, testing for

Leptospirosis is recommended, as is urinalysis and, if indicated based on urinalysis results, urine culture is recommended. If protein is present in an otherwise quiet sediment, protein quantification with a urine protein to creatinine ration is recommended.

Additionally, if not recently evaluated, a blood pressure is recommended.

In the meantime, beginning supportive/symptomatic medical management of clinical signs, combined with broad spectrum antibiotic therapy and diuresis, ideally, intravenously until values normalize or plateau, at which time, potentially, a transition to subcutaneous fluid therapy, or potentially no fluid therapy based on patient response could be considered.





The information and recommendations provided are based on the images presented by the referring veterinarian. No evaluation can be communicated regarding pathology that was not visible in the image/video clips provided.

Thank you for this referral. If the clinical or image interpretation does not parallel your findings or if I can be of any further assistance please contact me.

**Beth Johnson, DVM DACVIM**  
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